Oxford Biomedical Research
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Product Specification Sheet
Recombinant Human GST K1-1
Product Number: GS71
Aliquot: 100 µg
Lot Number: gs71.131220
Storage: -70°C

SPECIFIC ACTIVITY: 12.22 Units/mg using spectrophotometric determination of 1-chloro-2,4-dinitrobenzene (CDNB) conjugation with reduced glutathione (1 mM) in 100 mM $NaPO_4$ (pH 6.5) at room temperature. (NOTE: Although CDNB is not an ideal substrate for this GST isoform, the Specific Activity obtained is comparable to what has been reported using this substrate)

CONCENTRATION: 3.17 mg/mL total protein using the Bradford protein assay with BSA as a standard.

STORAGE BUFFER: 50 mM Tris-HCl (pH 7.5), 50 mM NaCl, 1 mM DTT, 1 mM EDTA and 50% glycerol.

STORAGE: –70˚C; **AVOID MULTIPLE FREEZE-THAW CYCLES.**

PURITY: ≥ 95% as assessed by inspection on a Coomassie® Blue-stained SDS-PAGE gel.

MOLECULAR WEIGHT: ~26 kDa

SOURCE: Recombinant His-tagged protein expressed in *E. coli*. The cDNA used for expression is derived from the major alternatively spliced transcript, variant 1.

REFERENCES:

Pemble, S.E., et al., *Biochem. J*, **319**: 749-754 (1996).
Morel, F., et al., *J. Biol. Chem.*, **279**: 16246-16253 (2004).
Morel, F., et al., *Drug Metab. Rev.*, **43**: 281-291 (2011).

Note: This purified product exhibits relatively low enzymatic activity for CDNB, the synthetic substrate that is most commonly used for GST analyses. However, it has been suspected for GST activity analysis using CDNB as a substrate, low concentrations (high dilutions) of the enzyme MAY result in lower activity values. In contrast, initial velocities are much higher for more concentrated levels of enzyme (~1 µg/ml) but the rate decreases rapidly. Therefore, activity toward CDNB and these considerations provide guidance when assaying this product under low concentrations or when using substrates other than CDNB.